

## ABSTRACT OF THE DISCLOSURE

The present invention provides an image binarization method in a form with the highest fidelity for multi-digitized luminance data, and a binary image creation method by which images can be obtained in real-time without post-processing. As a first processing, multi-digitized luminance data obtained by digitally converting video signals from an imaging device for each pixel on each horizontal scanning line is stored in a specific one of at least two horizontal line memories, and in the multi-digitized luminance data on the current scanning line, detected maximum value  $\text{MAX}_i$  and minimum value  $\text{MIN}_i$  exceeding a predetermined displacement level and the addresses of the detected pixel positions are stored in a specific one of at least two detection memories, and as a second processing, reading-out is carried out from the detection memory specified by the previous horizontal scanning line, and based on floating thresholds  $\text{FT}=\text{MIN}_i + |\text{MAX}_i - \text{MIN}_i| \times K$  (herein,  $K$  is an emphasis coefficient between 0 and 1, and  $i$  is an integer starting with 1) for each section of the horizontal pixel address row set by means of operation, multi-digitized data that has been read-out from the horizontal line memory specified by the previous horizontal scanning line is converted into binary data.